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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,673

12/27/2005

Michael Skerritt

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EXAMINER

LEE, ANDREW CHUNG CHEUNG

ART UNIT

PAPER NUMBER

2619

NOTIFICATION DATE

DELIVERY MODE

08/07/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/530,673	Applicant(s) SKERRITT, MICHAEL	
	Examiner Andrew C. Lee	Art Unit 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/10/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/10/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action in response to the Application #10530673 filed on 4/08/2005 is entered.

Claims 1 – 6 are hence entered and presented for examination.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 5/10/2006 was filed, and the submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

3. The abstract of the disclosure is objected to because the abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

Art Unit: 2619

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Le Scolan et al. (US 7058729 B1).

Regarding claim 1, Le Scolan et al. disclose a system for transmitting a clock signal through a packet-based network (Fig. 2, col. 10, lines 61 – 65) comprising: a first node configured to measure a clock frequency of the clock signal and calculate an accuracy indicator of the measured clock frequency (“The first node having a counter monitoring clock pluses of a clock.....,and “reading information...inserting at least said information or calculated information”; Fig.2, col. 5, lines 64 – 67, col. 6, lines 1 – 5); a second node configured to receive the clock frequency measurement and the accuracy indicator of the clock frequency measurement, and synthesize the clock signal therefrom (“The second node having a counter monitoring clock pulses of a clock...., and reading informationand reading synchronization information,,, and calculating a difference between information...”; Fig. 2, col. 6, lines 22 – 37); and a packet-based network for transmitting the measured clock frequency and accuracy indicator from the first node to the second node (Fig. 2, col. 5, lines 59 – 64).

6. Claims 4, 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Le Keating et al. (US 7099354 B2).

Regarding claim 4, Keating discloses in a packet-based network with a first transmitting node and a second receiving node (Abstract, Fig. 1), a method of

determining a frequency of a transmitting clock at the second receiving node (Fig. 3, col. 4, lines 57 – 65), said method comprising the steps of: receiving a first plurality of packets (“After a predetermined number of timing packets has been received”; col. 4, lines 65 – 67, col. 5, lines 1 – 4); determining a total time for transmission for each packet (col. 4, lines 57 – 61); identifying a predetermined number of packets in the plurality of received packets that have the shortest total transmission times (“the lowest loopback delay value” interpreted as have the shortest total transmission times; col. 4, lines 61 – 68, col. 5, lines 1 - 4); deriving the frequency of the transmitting clock by use of the identified predetermined number of packets (col. 5, lines 21 – 32).

Regarding claim 6, Keating discloses the method claimed additionally comprising the steps of: identifying the packet in the first plurality of received packets that has the shortest total transmission time (“scan the payload field of the timing packet for a loopback delay measurement which corresponds to that period timing element 120”; Fig. 3, col. 4, lines 58 – 65); receiving a second plurality of packets; determining a total time for transmission for each packet in the second plurality of packets (scan the payload field of the timing packet for a loopback delay measurement which corresponds to that period timing element 130 or 140”; Fig. 3, col. 4, lines 58 – 65); identifying a predetermined number of packets in the second plurality of received packets that have the shortest total transmission times (“the minimum loopback delay value detected will be designated”; col. 4, lines 65 – 68, col. 5, lines 1 – 4); deriving the frequency of the transmitting clock through the identified predetermined number of packets in the second

plurality of packets and the identified packet with the shortest total transmission time in the first plurality of packets (col. 5, lines 21 – 32).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holden et al. (5255291) in view of Le Scolan et al. (US 7058729 B1).

Regarding claim 2, Holden et al. disclose a system for transmitting bit synchronous data through a packet-based network (Abstract, col. 2, lines 43 – 47) comprising: a first node configured to receive the bit synchronous data for transmission through the network, the first node including measurement hardware for generating a clock frequency measurement of the bit synchronous data and an accuracy indicator (“bit synchronous mode”,...“frequency measurement using bit counters and system reference clocks,....., a very accurate low level indication of how close”; Fig. 2, col. 5, lines 55 – 60, col. 7, lines 10 – 61, col. 8, lines 50 – 64),

Holden et al. do not disclose explicitly the clock frequency measurement and the accuracy indicator to be transmitted through the network; and, a second node configured to receive the clock frequency measurement and accuracy indicator from the network, the second node including signal synthesizer hardware for synthesizing a clock

signal from the clock frequency measurement and accuracy indicator for retrieving the bit synchronous data; wherein the measurement hardware measures a number of counts during a predetermined period of time and the accuracy indicator is a period of time for measuring the number of counts.

Le Scolan et al. in the same field of endeavor teach the clock frequency measurement and the accuracy indicator to be transmitted through the network (Fig. 2, col. 5, lines 59 – 64); and, a second node configured to receive the clock frequency measurement and accuracy indicator from the network, the second node including signal synthesizer hardware for synthesizing a clock signal from the clock frequency measurement and accuracy indicator for retrieving the bit synchronous data (“the apparatus having a counter monitoring clock pulses of a clock,....reading means for reading synchronizing information,....calculating means for calculating a difference between information...”; Fig. 2, col. 6, lines 38 – 53); wherein the measurement hardware measures a number of counts during a predetermined period of time and the accuracy indicator is a period of time for measuring the number of counts (“the circuits 214 and 240 of Fig. 3, Fig. 4” interpreted as the measurement hardware measures a number of counts during a predetermined period of time; col. 12, lines 62 – 67;; “the calculation unit” interpreted as the accuracy indicator; Fig. 6b, Fig. 6c, col. 16, lines 16 – 67).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Holden et al. to include the features of the clock frequency measurement and the accuracy indicator to be transmitted through

the network; and, a second node configured to receive the clock frequency measurement and accuracy indicator from the network, the second node including signal synthesizer hardware for synthesizing a clock signal from the clock frequency measurement and accuracy indicator for retrieving the bit synchronous data; wherein the measurement hardware measures a number of counts during a predetermined period of time and the accuracy indicator is a period of time for measuring the number of counts as taught by Le Scolan et al. One of ordinary skill in the art would be motivated to do so for a method of synchronization between communication networks exchanging information by frame of information, each communication network having clock and the number of clock pulses is monitored by a counter (as suggested by Le Scolan et al., see col. 4, lines 66 – 67, col. 5, lines 1 – 2).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Le Scolan et al. (US 7058729 B1) in view of Holden et al. (5255291).

Regarding claim 3, Le Scolan et al. disclose a method for adaptive clocking in a packet-based network between a first node and a second node (Abstract), comprising the steps of: receiving a clock signal for transmission through the network at the first node (reading information representing the counted clock pulses at the appearance of a reference event; col. 6, lines 1 – 2); measuring the clock signal to obtain a frequency measurement at the first node; determining an accuracy indicator for the measured frequency measurement at the first node (The first node having a counter monitoring clock pluses of a clock.....,and “reading information...inserting at least said information

or calculated information”; Fig.2, col. 5, lines 64 – 67, col. 6, lines 1 – 5); transmitting the frequency measurement and the accuracy indicator through the network from the first node to the second node (Fig. 2, col. 5, lines 59 – 64); receiving the frequency measurement and the accuracy indicator at the second node; deriving a clock signal from the frequency measurement and the accuracy indicator at the second node (“the apparatus having a counter monitoring clock pulses of a clock,....reading means for reading synchronizing information,....calculating means for calculating a difference between information...”; Fig. 2, col. 6, lines 38 – 53) ; and Le Scolan et al. do not disclose explicitly transmitting the derived signal from the second node to a user equipment connected to the second node.

Holden et al. in the same field of endeavor teach transmitting the derived signal from the second node to a user equipment connected to the second node (“User equipment DTE connecting to IPX”; Fig. 4, col. 10, lines 22 – 33).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Le Scolan et al. to include the features of teach transmitting the derived signal from the second node to a user equipment connected to the second node as taught by Holden et al. One of ordinary skill in the art would be motivated to do so for providing an improved clocking transmission system and method for use in a communication system (as suggested by Holden et al., see col. 1, lines 60 – 62).

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keating (US 7099354 B2) in view of Mauritz et al. (US 6658025 B2).

Regarding claim 5, Keating discloses in a packet-based network with a first transmitting node and a second receiving node (Abstract, Fig. 1). Keating does not disclose explicitly the method claimed wherein the derived frequency is used maintain buffer fill at the second receiving node.

Mauritz et al. in the same field of endeavor teach the method claimed wherein the derived frequency is used maintain buffer fill at the second receiving node ("to estimate the frequency f using advantageously a pre-defined window of time stamps"; col. 4, lines 32 – 43; col. 3, lines 64 – 66).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Keating to include the features of teach transmitting the derived signal from the second node to a user equipment connected to the second node as taught by Mauritz et al. One of ordinary skill in the art would be motivated to do so for providing enhancement of frequency synchronization in networks with variable delays (as suggested by Mauritz et al., see col. 1, lines 51 – 22).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Matsumoto et al. (4845709).

b) Roust (US 6829717 B1).

- c) Raisanen et al. (US 6577648 B1).
- d) Trans (US 6377640 B2).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571)272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C Lee/
Examiner, Art Unit 2619
<7/30/2008>

Application/Control Number: 10/530,673
Art Unit: 2619

Page 11

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